

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-21, 23-24, 27-37, and 39 are pending in the application, with 1, 15, 17, and 23 being the independent claims. Claims 22, 25, 26, and 38 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Priority

The Examiner noted that the present application "lacks the necessary reference to the prior application. A statement reading 'This is a continuation of Application No. PCT/EP97/02117, filed 4/25/1997.' should be entered[.]" (Office Action § 1.) Accordingly, Applicants have amended the specification to include the necessary reference.

Applicants thank the Examiner for acknowledging their claim for foreign priority to Application No. 97400650.4, filed in Europe on March 21, 1997. (See, Office Action § 1.) Applicants plan to file a certified copy of this application after it is procured.

Objection to the Abstract

An objection to the Abstract was made because it is not double-spaced as required by M.P.E.P § 608.01(b). (*See*, Office Action § 2.) Accordingly, Applicants have provided a double-spaced version of the Abstract as a substitute sheet.

Objection to the Specification

An objection to the Specification was made because it lacks appropriate headings. (*See*, Office Action § 2.) Accordingly, Applicants have amended the Specification to insert appropriate headings.

Rejections under 35 U.S.C. § 112

Claims 29, 31 and 32 were rejected under 35 U.S.C. § 112, second paragraph, because the limitation "random number" has insufficient antecedent basis. (*See*, Office Action § 3.) Accordingly, Applicants have amended claims 29, 31, and 32 each to depend from claim 23. Applicants also have amended claim 23 to introduce "a random number". In light of these amendments, Applicants respectfully requests that the Examiner reconsider and remove the rejections of claims 29, 31, and 32 under 35 U.S.C. § 112.

Rejections under 35 U.S.C. § 102

Claims 1, 4, 5, 10-12, 17, 19-24, 33, 36, and 37 were rejected under U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,870,155 to Erlin, hereinafter "Erlin". (See, Office Action § 4.) Applicants respectfully traverse these rejections.

Regarding claim 1, the Examiner asserts that "Erlin discloses in figure 4, a receiver/decoder 40 attached to a TV 42, a remote control 10 with a built in card reader (column 2, lines 38-61) for reading banking/credit information when the card is swiped through the card reader (column 1, lines 43-53, column 2, lines 38-61)." (Office Action § 4.)

Here, Erlin describes a remote control unit having an integral magnetic-stripe credit card reader. While the unit can transmit financial data read from the magnetic stripe of a credit card to a cable set top box 40, there is no disclosure that the set top box 40 itself contains a card reader. Thus, there is no disclosed capability that a user's card inserted in such a reader can receive information from a remote center in response to a payment made using the credit card.

In contrast, amended claim 1 of the present invention defines a highly versatile apparatus in the form of a receiver/decoder which enables a user to carry out transactions through the medium of a television system which requires the user to insert a card, such as a smartcard, into a receiver/decoder in order to view particular television programs.

Using the present invention, the user's card can receive information from a remote center in response to a payment made using a credit or bank card. For example, the user's card can receive credit information for use in "charging" the card in response

to a payment made using the credit or bank card. By way of a further example, the user's card can receive rights to enable the user's card to descramble a Pay-Per-View (PPV) event in response to a payment made using the credit or bank card. By providing both card readers in the receiver/decoder, there is no need for the user to be switching cards held by a single card reader. Both cards can be inserted into their respective reader at the start of the transaction. This can reduce significantly the time taken and the ease with which the information stored on the user's card can be modified to enable a PPV event to be viewed by the user. Therefore, Erlin does not anticipate the present invention as claimed in claim 1.

Claims 4, 5, 10-12, 20, and 21 depend directly or indirectly from amended claim 1. Therefore, dependent claims 4, 5, 10-12, 20, and 21 are allowable for at least the reason described above with respect to independent claim 1, and further in view of their own respective features.

Regarding claim 17, the Examiner asserts that "Erlin discloses in Figures 6A-H a method of ordering items and services in which a receiver/decoder 40 at a user site is used to select an item/service for purchase, sends bank/credit card information to a remote site for verification and transmitting the order for services/products such as a request for casino cash (column 4, line 64-column 6, line 2). (Office Action § 4.)

Here, Erlin describes nothing more than a verification that the correct transaction details, such as the credit card account information, credit card holder information, credit card expiration date, PIN number, and amount transaction number are being transmitted to a home shopping network. (Erlin at column 5, lines 39-43). No steps are taken to

verify the authenticity of the shopping network before these details are output from the set top box, which could have very serious consequences.

In contrast, amended claim 17 of the present invention provides a method of providing an order for an item or service that includes a step of verifying the remote centre. This step is performed after a step of generating an order request, but after a step of transmitting order information to the remote centre for processing. The purpose of verifying the remote centre is to verify the authenticity of the remote centre so as to ensure that the account information is not received by an unauthorized third party. Therefore, Erlin does not anticipate the present invention as claimed in claim 17.

Claim 19 depends directly from amended claim 17. Therefore, dependent claim 19 is allowable for at least the reason described above with respect to independent claim 17, and further in view of its own respective features.

Claim 22 has been cancelled without prejudice or disclaimer. Therefore, the Examiner's rejection with respect to claim 22 has been rendered moot.

Regarding claim 23, the Examiner asserts that "Erlin discloses a combined remote control/card reader in Figure 1 with a casing, which is used to transmit financial information and enter a PIN number, and utilizes a DES chip 65 for encrypting the data (Figures 6a-h, column 4, line 64-column 5, line 43, column 4, lines 18-20)." (Office Action § 4.)

Here, Erlin uses a DES chip 65 to encrypt the output from the remote controller. This is exactly what the present invention seeks to avoid. Amended claim 23 defines a remote controller that includes means for rendering the transmission of a PIN number secure through use of encryption means for encrypting the PIN number. The encryption

means include means for combining the PIN number with a random number and passing the thus-encrypted PIN number to transmission means for subsequent transmission thereby. Thus, the security means provided in the remote controller is relatively modest. This is because: (a) the likelihood of the transmitted PIN number being intercepted between the remote controller and the item of equipment is relatively low, and (b) the only information which is transmitted in "encrypted form" is a PIN number, which by itself would not be of much use to an interceptor without knowledge of any additional information, such as a bank account number. Accordingly, equipment costs can be kept low, as there is no requirement to provide expensive chips for performing complex encryption techniques, such as DES. Therefore, Erlin does not anticipate the present invention as claimed in claim 23.

Claims 24, 33, 36, and 37 depend directly or indirectly from amended claim 23. Therefore, dependent claims 24, 33, 36, and 37 are allowable for at least the reason described above with respect to independent claim 23, and further in view of their own respective features.

Rejections under 35 U.S.C. § 103

Erlin

Claims 13, 14, 25, 28, and 39 were rejected under U.S.C. § 103(a) as being unpatentable over Erlin. (See, Office Action § 5.) Applicants respectfully traverse these rejections.

Claims 13, 14, 28, and 29 depend directly or indirectly from amended claims 1 or 23. Therefore, dependent claims 13, 14, 28, and 29 are allowable for at least the reason described above with respect to independent claims 1 and 23, and further in view of their own respective features.

Claim 25 has been cancelled without prejudice or disclaimer. Therefore, the Examiner's rejection with respect to claim 25 has been rendered moot.

Erlin in View of Holtey

Claims 2, 3, 15, and 16 were rejected under U.S.C. § 103(a) as being unpatentable over Erlin in view of U.S. Patent No. 5,491,827 to Holtey, hereinafter "Holtey". (See, Office Action § 5.) Applicants respectfully traverse these rejections.

At section 5 of the Office Action the Examiner asserts:

Regarding claim 15, Erlin discloses a remoter [sic] control with a card reader, which reads bank/credit cards (column 1, lines 43-53, column 2, lines 38-61) and allows a user to order a VOD movie (column 5, lines 48-51) for viewing on a TV 42. Erlin does not disclose interacting with a card that contains a microprocessor or the use of bank/smart cards in a digital satellite receiver. Holtey discloses in Figure 1, a smart card 3, with a microprocessor 10 and flash memory 103 that stores identification information such as a pin number and readable by the microprocessor (column 5, lines 10-25, column 6, lines 1-19). The examiner takes official notice that the use of smart cards as storage/authorization devices in digital satellite systems is well known. Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the credit card [of] Erlin to include the microprocessor and memory of Holtey in a digital satellite system in order to provide an extra security feature to protect the cards [sic] owner from having their [sic] credit card stolen, and as a means for storing additional data on the credit card as well as to prohibit unauthorized users from receiving programming they did not pay for.

While Applicants acknowledge that the use of such smartcards in a satellite system is well known, Holtey neither teaches nor suggests providing dual card readers –

one for a credit card *and* one for such a smartcard – in a receiver/decoder. Thus, there is no suggestion of the advantages that could be provided thereby.

Furthermore, the Examiner is reminded that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination" (M.P.E.P. § 2143.01), and that neither Erlin nor Holtey suggests including the microprocessor and memory of Holtey in the credit card of Erlin. Accordingly, the Office Action has not met the initial burden for *prima facie* obviousness, according to M.P.E.P. § 2142.

In light of the foregoing amendment and arguments, Applicants respectfully request that the Examiner reconsider his rejection of claim 15 under 35 U.S.C. § 103(a) with respect to Erlin and Holtey and that the rejection be removed.

Claim 16 depends directly from amended claim 15. Therefore, dependent claim 16 is allowable for at least the reason described above with respect to independent claim 15, and further in view of its own respective features.

Claims 2 and 3 depend directly or indirectly from amended claim 1. Therefore, dependent claims 2 and 3 are allowable for at least the reason described above with respect to independent claim 1, and further in view of their own respective features.

Erlin in View of Henderson

Claims 6-9 were rejected under U.S.C. § 103(a) as being unpatentable over Erlin in view of U.S. Patent No. 5,603,078 to Henderson, hereinafter "Henderson". (*See, Office Action § 5.*) Applicants respectfully traverse these rejections.

Claims 6-9 depend directly or indirectly from amended claim 1. Therefore, dependent claims 6-9 are allowable for at least the reason described above with respect to independent claim 1, and further in view of their own respective features.

Furthermore, Henderson describes a similar remote control as that of Erlin, namely a remote control 100 having an integral magnetic-strip credit card reader. Again, there is no disclosure in Henderson that the *receiver* 18, which receives signals from remote control 100, *contains a card reader*. Thus, there is no hint that a user's card inserted in such a reader can receive information from a remote center in response to a payment made using the credit card. Because there is no suggestion of including any card reader in the receiver 18, there is also no suggestion that the credit card reader could be housed in the receiver 18. Thus, claims 1 and 6-9 are novel and unobvious over Erlin and Henderson.

Erlin in View of Merritt

Claims 18, 26-32, 34, and 35 were rejected under U.S.C. § 103(a) as being unpatentable over Erlin in view of U.S. Patent No. 5,751,756 to Merritt, hereinafter "Merritt". (See, Office Action § 5.) Applicants respectfully traverse these rejections.

Claims 18, 27-32, 34, and 35 depend directly or indirectly from amended claims 17 or 23. Therefore, dependent claims 18, 27-32, 34, and 35 are allowable for at least the reason described above with respect to independent claims 17 and 23, and further in view of their own respective features.

Claim 26 has been cancelled without prejudice or disclaimer. Therefore, the Examiner's rejection with respect to claim 26 has been rendered moot.

Furthermore, as is the case with Erlin, Merritt also uses DES encryption. Merritt uses DES encryption to encrypt outputs from an ATM 10 to a host 2. Although Merritt discloses the use of random numbers to provide verification of a terminal, these random numbers are not combined with any other numbers or identifiers when they are transmitted in encrypted form between the ATM and the host. The Applicants dispute the Examiner's assertion that it would be obvious to combine an identifier and the random number in conjunction with such communications. Firstly, there is no indication in Merritt that such a combination would be desirable. Secondly, there is no need to make such a combination in Merritt because the DES encryption itself provides sufficient security for communications between the host and the ATM. Thus, claims 23, 26-32, 34, and 35 are novel and unobvious over Erlin and Merritt.

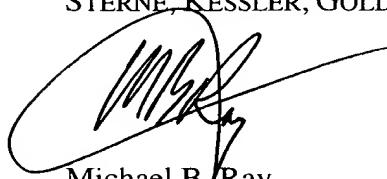
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

Respectfully submitted,

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Version with markings to show changes made

In the Specification:

Please add the following paragraph after the title of the invention:

This application is a continuation of Application No. PCT/EP97/02117, filed April 25, 1997.

Please insert the following heading before line 1 on page 1:

BACKGROUND OF THE INVENTION

Field of the Invention

Please insert the following heading between lines 3 and 4 on page 1:

Background Art

Please insert the following heading between lines 16 and 17 on page 1:

BRIEF SUMMARY OF THE INVENTION

Please insert the following heading between line 32 on page 7 and line 1 on page 8:

BRIEF DESCRIPTION OF THE FIGURES

Please insert the following heading between lines 28 and 29 on page 8:

DETAILED DESCRIPTION OF THE INVENTION

In the Claims:

Please cancel claims 22, 25, 26, and 38 without prejudice or disclaimer.

Please amend claims 1-15, 17-21, 23, 24, 27, 29-37, and 39 as follows:

1. (Once Amended) [Apparatus including a] A receiver/decoder for use in reception of a television or radio programme or a data file, the [apparatus] receiver/decoder including means for interacting with a user's credit or bank card to read information carried by the user's credit or bank card, and, separate from said means, a further interacting means for interacting with a user's smartcard [card] to read information carried by the user's smartcard card, information stored on the user's smartcard [card] being modifiable in response to a payment by means of the user's credit or bank card.

2. (Once Amended) A receiver/decoder [Apparatus] according to Claim 1, arranged to interact with [a] the user's credit or bank card, wherein the user's credit or bank card incorporates [incorporating] a microprocessor.

3. (Once Amended) A receiver/decoder [Apparatus] according to Claim 2
arranged to provide information to the microprocessor.

4. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1,
further including means for transmitting to a remote centre a debit instruction, based on
the information carried by the user's credit or bank card.

5. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1,
further including means arranged to receive authorization information from a remote
centre.

6. (Once Amended) A receiver/decoder [Apparatus] according to Claim 5
arranged to control decoding or descrambling of the television or radio programme or the
data file in dependence on the authorization information.

7. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1,
further including means for storing reception credit information representing credits
available for purchase of products in memory means of the user's smartcard [card].

8. (Once Amended) A receiver/decoder [Apparatus] according to Claim 4
arranged to send debit instructions to the remote centre and to modify [the] reception
credit information stored in the user's smartcard [card] by increasing [the] a number of

credits stored on the user's smartcard [card] in response to payment by means of the user's bank or credit card.

9. (Once Amended) A receiver/decoder [Apparatus] according to Claim 8 arranged to effect purchase of credits sufficient to allow a plurality of products to be purchased for each transaction in which a debit instruction of the debit instructions is sent to the remote centre.

10. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1 further including means for processing data representative of the user's bank or credit card together with received data representative of an item or service offered, and for transmitting an order request to a remote centre for processing.

11. (Once Amended) A receiver/decoder [Apparatus] according to Claim 10 including means for inputting a request from a user to purchase [an] the item offered.

12. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1 further including means for receiving a PIN number.

13. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1 in the form of a set-top-box.

14. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1 adapted for reception of satellite transmitted programmes or files[, preferably digital satellite programmes or files].

15. (Once Amended) A receiver/decoder for use in a digital satellite television system including a decoder, means to accommodate a credit or bank card carrying a microprocessor, means to interact with said microprocessor when the credit or bank card is inserted into an operative position in said receiver/decoder in order to enable data carried by said credit or bank card to be read and data to be input to the microprocessor carried by said credit or bank card and means to accommodate a smartcard whereby insertion of the smartcard by [the] an end user into the receiver/decoder enables the smartcard to interact with means in said receiver/decoder whereby a product selected by the end user may be delivered to said receiver/decoder and from there to a television set or personal computer to which the receiver/decoder is adapted to be connected, information stored on the [user's card] smartcard being modifiable in response to payment by means of the credit or bank card.

17. (Once Amended) A method of providing an order for an item or service comprising, at a receiver/decoder at which information concerning the item or service is received, reading account information from a bank or credit card, subsequently generating an order request containing information identifying the item or service and said account information [representative of] from the bank or credit card information,

subsequently verifying [the] a remote centre and, following verification, subsequently transmitting order information to the remote centre for processing.

18. (Once Amended) A method according to Claim 17, comprising the steps of passing a random number to [a] the remote centre, receiving the random number in an encrypted form from the remote centre, and decrypting the encrypted random number to verify the remote centre.

19. (Twice Amended) A method according to Claim 17, further comprising, at the remote centre, processing the order information and determining whether to authorise [the] a transaction on [the] a basis of the bank or credit card information.

20. (Twice Amended) A receiver/decoder [Apparatus] according to Claim 1, further comprising a remote controller for transmitting a user's Personal Identification (PIN) Number to the receiver/decoder.

21. (Once Amended) A receiver/decoder [Apparatus] according to Claim 20, wherein the remote controller includes security means for rendering the transmission secure.

23. (Once Amended) A remote controller for an item of equipment, comprising: means defining a body for said controller;

transmission means for transmitting a user's Personal Identification (PIN)

Number to said item of equipment; and

[security means for rendering said transmission secure] encryption means for encrypting the PIN number, wherein the encryption means comprises means for combining the PIN number with a random number and passing the thus-encrypted PIN number to said transmission means for subsequent transmission thereby.

24. (Twice Amended) A remote controller as in Claim [22] 23 in which the transmission means comprises means for generating an infra-red beam.

27. (Once Amended) A remote controller as claimed in Claim [26] 23 further comprising means for enabling the user to input the random number.

29. (Twice Amended) A remote controller as claimed in Claim [25] 23 in which said encryption means comprises means for storing the random number in the controller.

30. (Twice Amended) A remote controller as claimed in Claim [22] 23 in which said encryption [security] means comprises means for generating a number characteristic of the [individual] remote controller, for transmission via said transmitting means to the item of equipment.

31. (Twice Amended) A remote controller as claimed in Claim [25] 23 in which said encryption means includes means for generating a number characteristic of the

[individual] remote controller and means for combining said characteristic number with said random number and said PIN number.

32. (Twice Amended) A remote controller as claimed in Claims [25] 23 in which said encryption means comprises means for receiving [a] said random number from said item of equipment and means for combining [that] said random number with the user's PIN number for transmission via the transmitting means to said item.

33. (Twice Amended) A combination comprising [a] the remote controller as claimed in Claim [22] 23 and said item of equipment, said item of equipment having means for receiving [a] the user's PIN number.

34. (Once Amended) A combination as claimed in Claim 33 in which said item of equipment comprises means for generating [a] said random number and means for outputting said random number to a display unit.

35. (Twice Amended) A combination as claimed in Claim 33 in which said item of equipment comprises means for generating [a] said random number and means for transmitting said random number to said remote controller.

36. (Twice Amended) A combination as claimed in Claim 33, wherein said item of equipment comprises:

a receiver/decoder for use in reception of a television or radio programme or a data file;

means for interacting with a user's credit or bank card to read credit or bank information carried by the user's credit or bank card; and further interacting means, separate from said interacting means, for interacting with a user's smartcard [card] to read information carried by the user's smartcard [card].

37. (Twice Amended) A digital television system, comprising an item of television equipment, said item having means for receiving [a] the user's PIN number, and [a] the remote controller as claimed in Claim [22] 23.

39. (Twice Amended) A method of entering [a] the PIN number into a television system comprising employing [a] the remote controller as claimed in Claim [22] 23 to transmit said PIN number to a television.

Abstract

A receiver/decoder for use in a digital satellite radio or television system includes a decoder and means to accommodate a credit or bank card carrying a microprocessor, and means to interact with said microprocessor when the credit or bank card is inserted into an operative position in said receiver/decoder in order to enable data carried by said credit or bank card to be read and data to be input to the microprocessor carried by said credit or bank card. A PIN number may be transmitted to the receiver/decoder in a secure fashion by means of a remote controller, which is also described. Applications of the invention include Pay-Per-View television, teleshopping and telebanking.
